

Reply Under 37 C.F.R. § 1.116
Expedited Procedure
Technology Center 3700

Application No.: 10/586,866
Art Unit: 3753

LIST OF CURRENT CLAIMS

1. (Previously Presented) A flow control valve, comprising:
 - inside a cylindrical casing, a meter-out inlet, a valve chamber, a rod chamber for housing an adjusting rod to be advanceable and retreatable in an axial direction, and a meter-out outlet are communicatively connected in that order,
 - a throttle valve seat is provided on a leading end portion of the adjusting rod, and the throttle valve seat is communicatively connected to the meter-out outlet via a communicating passage inside the adjusting rod,
 - a check member inserted in the valve chamber is urged toward the throttle valve seat by an elastic member, and
 - the throttle valve seat and the check member are relatively moveable by advancing and retreating the adjusting rod in the axial direction, so that adjustment of a throttle gap formed between the check member and the throttle valve seat is enabled.
2. (Previously Presented) The flow control valve as set forth in claim 1, wherein
 - the rod chamber and the valve chamber are arranged substantially concentrically, a check valve seat is provided on an inner peripheral surface of a peripheral wall of the valve chamber, and the check member can be brought into contact with the check valve seat by the elastic member.
3. (Previously Presented) A flow control valve, comprising:
 - inside a cylindrical casing, a meter-in inlet, a rod chamber for housing an adjusting rod to be advanceable and retreatable in an axial direction, a throttle valve seat arranged substantially concentrically with the rod chamber, and a meter-in outlet are communicatively connected in that order,

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a valve chamber is provided in at least one of a leading end portion of the adjusting rod and the rod chamber, and a check member inserted in the valve chamber is urged toward the throttle valve seat by an elastic member, and

the check member and the throttle valve seat are relatively moveable by advancing and retreating the adjusting rod in the axial direction, so that adjustment of a throttle gap formed between the check member and the throttle valve seat is enabled.

4. (Previously Presented) The flow control valve as set forth in claim 3, wherein

the valve chamber is provided inside the leading end portion of the adjusting rod, a check valve seat is provided on an inner peripheral surface of a peripheral wall of the valve chamber, and the check member can be brought into contact with the check valve seat by the elastic member.

5. (Previously Presented) A cylinder apparatus having the flow control valve as set forth in any one of claims 1 to 4, wherein

inside a housing of the cylinder apparatus, a fluid actuation chamber is communicatively connected to a pressure ports via an actuation port and a supply and discharge passage, and an mounting hole communicatively connected to the supply and discharge passage is opened in an outer surface of the housing, and the cylindrical casing is attached to the mounting hole, and

the actuation port is communicatively connected to the meter-out inlet or the meter-in outlet, and the pressure port is communicatively connected to the meter-out outlet or the meter-in inlet.

6. (Previously Presented) A cylinder apparatus having a flow control valve, comprising:

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inside a housing of the cylinder apparatus, a fluid actuation chamber is communicatively connected to a pressure port via an actuation port and a supply and discharge passage,

a mounting hole opened in an outer surface of the housing is provided, one end portion of the supply and discharge passage is opened in a bottom surface of the mounting hole, and the other end portion of the supply and discharge passage is opened in a peripheral surface of the mounting hole,

a cylindrical casing is attached to the mounting hole, and a leading end portion of the cylindrical casing is brought into contact with or made to approach a bottom wall of the mounting hole, and thereby, the actuation port and the pressure port are partitioned, and

valve elements of a flow control valve are arranged inside the cylindrical casing so that the actuation port and the pressure port can be communicatively connected to each other via the valve elements.

7. (Previously Presented) The cylinder apparatus having the flow control valve as set forth in claim 6, wherein

a barrel portion of the cylindrical casing is screwed in the mounting hole.